

In re Patent Application of:  
TEGGE, JR. ET AL.  
Serial No. 10/673,992  
Filed: SEPTEMBER 29, 2003

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#### REMARKS

The Examiner is thanked for the thorough examination of the present application, and for correctly allowing Claims 1-12, 25-32, and 41-48. Claims 23 and 40 have been amended to correct the noted informalities, as helpfully pointed out by the Examiner. In view of the arguments presented in detail below, it is submitted that all of the claims are patentable.

#### I. The Claimed Invention

The present invention is directed to a modular free space optical (FSO) communications device. As recited in independent Claim 13, for example, the FSO communications device includes an adaptive optics (AO) module including an AO housing and at least one AO device carried thereby. The FSO communications device further includes an optical relay (OR) module including an OR housing and a fixed telescopic lens device having a predetermined focal length range carried by the OR housing. Moreover, the OR housing and the AO housing are connectable and establish an optical path between the at least one OR device and the at least one AO device when connected. Independent Claim 33 is directed to a related FSO communications system.

#### II. The Claims Are Patentable

The Examiner rejected independent Claims 13 and 33 under 35 U.S.C. §102(e) based upon U.S. Patent Publication No.

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2004/0141752 to Shelton et al. This reference is directed to a free space optical communication system that includes an adaptive optical power regulator. The adaptive optical power regulator adapts to changes in effective loss associated with the free space optical path. In one embodiment the adaptive optical power regulator adapts to scintillation losses. In another embodiment, the adaptive optical power regulator further adapts to changes in atmospheric loss associated with changes in weather. See, e.g., paragraphs 0010-0012 of Shelton et al.

The Examiner points to the embodiment illustrated in FIG. 3 of Shelton et al. and contends that a deformable mirror 315 is equivalent to the claimed AO module, that a steering mirror 305 is equivalent to the claimed OR relay, and that a telescopic objective lens 310 is equivalent to the claimed fixed telescopic lens. Moreover, the Examiner also contends that Shelton et al. somehow inherently teaches an AO housing for the deformable mirror 315, and an OR housing for the steering mirror 305 and/or telescopic objective lens 310. That is, the Examiner simply contends that "it is inherent that the optical device comprise housing in order to provide protection from environmental conditions." Office Action, page 3.

It is respectfully submitted that the Examiner mischaracterizes the teachings of Shelton et al., as this reference fails to teach separate AO and OR housings for respective AO and OR components. That is, the above-noted independent claims recite two distinct housings (i.e., the AO and

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OR housings) that are connectable to one another. While the Examiner assumes that the components of the Shelton et al. system illustrated in FIG. 3 thereof are enclosed in some sort of housing, even assuming *arguendo* that this is true there is no teaching or indication in Shelton et al. that these components could be positioned in separate housings that are connectable to one another such that an optical path is established between an OR device(s) in the OR housing and an AO device(s) in the AO housing when the two housings are connected.

Rather, every indication provided in Shelton et al. is to the contrary. For example, there are no boundary lines or other indicators provided in FIG. 3 of Shelton et al. that would indicate to one of ordinary skill in the art that the AO and OR components thereof could or even should be located in separate housings. Moreover, a continuous light beam is shown between the deformable mirror 315, telescopic objective lens 310, and steering mirror 305. Thus, Shelton et al. would more likely indicate to one of ordinary skill in the art that, if these components were to be enclosed in a housing, it should be the same housing so that the optical path between the components is not interrupted by housing walls. Thus, Shelton et al. simply fails to teach (or fairly suggest) all of the recitations of the above-noted independent claims, and would rather appear to teach away from the claimed invention for the above-noted reasons.

Accordingly, it is submitted that independent Claims 13 and 33 are patentable over the prior art. Their respective

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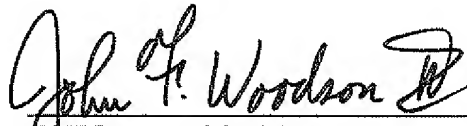
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dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

#### CONCLUSION

In view of the amendments to the claims and the arguments provided herein, it is submitted that all the claims are patentable. Accordingly, a Notice of Allowance is requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,



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